

Claims

- [c1] 1. A backlight module comprising:
 - an assembly of a rear substrate and a front substrate, a hermetic discharge gap being formed there between and mounted with power electrodes;
 - a discharge gas filled in the discharge gap, the discharge gas being discharged by the power electrodes; and
 - a plurality of fluorescent layers of different color emissions disposed on a surface of the assembly of the rear substrate and front substrate.
- [c2] 2. The backlight module of claim 1, wherein the fluorescent layers of different color emissions are disposed on an inner surface of the assembly of the rear substrate and the front substrate inside the discharge gap.
- [c3] 3. The backlight module of claim 1, wherein the fluorescent layers of different color emissions are disposed on an outer surface of the front substrate outside the discharge gap.
- [c4] 4. The backlight module of claim 1, further comprising a light-shielding layer disposed between the two adjacent fluorescent layers of different color emissions.

- [c5] 5.The backlight module of claim 4, wherein the light-shielding layer is a first reflective layer.
- [c6] 6.The backlight module of claim 4, wherein the light-shielding layer is a black matrix.
- [c7] 7.The backlight module of claim 1, further comprising a second reflective layer disposed on an inner surface of the assembly of the rear substrate and the front substrate inside the discharge gap.
- [c8] 8.The backlight module of claim 1, wherein the fluorescent layers of different color emissions are arranged in a delta shape, in a mosaic shape, in a first strip shape, or in a second strip shape.
- [c9] 9.The backlight module of claim 1, wherein the rear substrate and the front substrate are made of a glass material.
- [c10] 10.A liquid crystal display comprising:
 - a liquid crystal panel, the liquid crystal panel comprising:
 - a first substrate;
 - a second substrate parallel with and spaced apart from the first substrate; and
 - a liquid crystal layer disposed between the first substrate and the second substrate; and

a backlight module, operable to illuminate the liquid crystal panel for displaying color images, and the backlight module including a plurality of fluorescent layers configured to emit light of different colors to the liquid crystal panel.

- [c11] 11. The liquid crystal display of claim 10, wherein the backlight module further comprising:
- an assembly of a third substrate and a fourth substrate above the third substrate, a hermetic discharge gap being formed there between and mounted with power electrodes;
- a discharge gas filled in the discharge gap, and the discharge gas being discharged by the power electrodes;
- and
- a plurality of fluorescent layers of different color emissions being disposed on a surface of the assembly of the third substrate and the fourth substrate.

- [c12] 12. The liquid crystal display of claim 11, wherein the fluorescent layers of different color emissions are disposed on an inner surface of the assembly of the third substrate and the fourth substrate inside the discharge gap.

- [c13] 13. The liquid crystal display of claim 11, wherein the fluorescent layers of different color emissions are dis-

posed on an outer surface of the fourth substrate outside the discharge gap.

- [c14] 14. The liquid crystal display of claim 11, further comprising a light-shielding layer disposed between the two adjacent fluorescent layers of different color emissions.
- [c15] 15. The liquid crystal display of claim 14, wherein the light-shielding layer is a first reflective layer.
- [c16] 16. The liquid crystal display of claim 14, wherein the light-shielding layer is a black matrix.
- [c17] 17. The liquid crystal display of claim 11, further comprising a second reflective layer disposed on an inner surface of the assembly of the third substrate and the fourth substrate inside the discharge gap.
- [c18] 18. The liquid crystal display of claim 11, wherein the fluorescent layers of different color emissions are arranged in a delta shape, in a mosaic shape, in a first strip shape, or in a second strip shape.
- [c19] 19. The liquid crystal display of claim 11, wherein the fourth substrates is permeable to ultraviolet rays.